L 25447-66
ACC NR: AP6009700

creased oxygen content in the vacuum chamber. An increased nitrogen content caused the change in the type of epitaxy to be observed irregularly even at considerable values of τ. Orig. art. has: 2 figures

SUB CODE: 11,20/ SUBM DATE: 040ct65/ OTH REF: 001

Card 3/3 dc

L 39611-66 EWT(l)/EWP(e)/EWT(m)/T/EWP(t)/EWP(z)/EWP(b) IJP(c) JD/HW/GS/GD-2

ACC NR: AP6004464 SOURCE CODE: UR/0048/66/030/001/0043/0045

AUTHOR: Pyn ko, V.G.; Sukhanova, R.V.

ORG: Institute of Physics, Siberian Section of the Academy of Sciences, SSSR (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk State Pedagogical Institute (Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Concerning epitaxial growth and structure of iron, nickel, and cobalt films [Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to 15 July, 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 43-45 and insert facing pp. 44 and 45

TOPIC TAGS: ferromagnetic film, magnetic thin film, iron, cobalt, nickel, sodium chloride, epitaxial growing, crystal orientation,

ABSTRACT: Iron, cobalt, and nickel films were vacuum evaporated onto freshly cleaved rock salt crystal surfaces and their structures were investigated by electron diffraction. The films were deposited in three different types of apparatus, referred to as A, B, and C. In apparatus A the pressure during deposition was 10^{-5} mm Hg. Apparatus B and C were commercial vacuum units (type UVR-2) in which the pressure was 10^{-4} mm Hg. The substrates were heated at 300-400°C for 20-30 min before deposition. The deposition rate was usually about 100 Å/sec. Iron films deposited in apparatus

Card 1/2

L 39611-66

ACC NR: AP6004464

A always contained both directly and diagonally oriented crystallites as well as different amounts of randomly oriented crystallites. Films deposited in instruments B and C were usually similar to those obtained with instrument A, but sometimes, for no apparent reason, there were obtained films consisting entirely of diagonally oriented crystallites and showing absolutely no Debye-Sherrer rings. "Forbidden" reflections were observed, which are ascribed to formation of an epitaxial layer of NaCl at the time that the substrate was dissolved away. It is hypothesized that only directly oriented iron crystallites would be deposited on a pure NaCl crystal face and that the appearance of crystallites with other orientations is due to disturbance of the crystal face topography by different atoms of the residual gas. The iron films contained 0.004% C, 0.002% S, 0.004% O and traces of Ni and Si. Oriented nickel films were obtained at substrate temperatures as low as 140-150° and the first indications of orientation were observed at substrate temperatures close to room temperature, although L. Brück (Ann. Phys., 26, 233 (1936)) found that a substrate temperature of 370° was required for formation of oriented nickel films. Fully oriented cobalt films were obtained at a substrate temperature of 200°; Brück (loc.cit.) considered it impossible to deposit oriented cobalt films on rock salt surfaces. The cobalt was evaporated from a 1 mm diameter molybdenum wire located 3.5 cm from the substrate. It is concluded that a pressure of 10^{-4} mm Hg is particularly suitable for epitaxy, that the epitaxial growth of iron films is conditioned by the composition of the residual gas, and that the rate of deposition is not significant. Orig. art. has: 5 figures.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 000 OTH REF: 007

Card 2/2 mlp

L 36341-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015777 (A,N) SOURCE CODE: UR/0048/66/030/005/0832/0834

43
B

AUTHOR: Sivkov, N. I.; Prokopenko, V.S.; Pyn'ko, V. G.

ORG: Krasnoyarsk Pedagogical Institute (Krasnoyarskiy pedagogicheskiy institut); Institute of Physics, Siberian Section, Academy of Sciences of the SSSR (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Concerning magnetization reversal in single crystal iron films /Report, Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 832-834

TOPIC TAGS: electron microscopy, magnetic domain structure, ferromagnetic film, iron

ABSTRACT: Two series of electron micrographs are presented showing variations of the domain structure of an iron film during magnetization reversal. The 800 Å thick film was evaporated at 10^{-4} mm Hg onto a freshly cleaved NaCl surface heated to 150-200° C. The film had two equivalent easy axes. In such a film magnetization reversal along an easy axis takes place by nucleation and growth of spike domains with 90° walls followed by appearance of a region of reversed magnetization, which grows by motion of the 180° walls. One series of electron micrographs shows the appearance of "steps" at the tip of a spike during the early stage of this process. The second series of elec-

Card 1/2

L 36341-66

ACC NR: AP6015777

tron micrographs shows passage of a 180° domain wall past an inhomogeneity in the film with the temporary formation of a triangular domain with 90° walls. These phenomena are discussed briefly. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 001

Card 2/2

L 46922-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/HW/JG/GG/AT

ACC NR: AP6015502 SOURCE CODE: UR/0181/66/008/005/1635/1636

54

AUTHOR: Pyn'ko, V. G.; Galepov, P. S.

B

ORG: Institute of Physics, SO AN SSSR, Krasnoyarsk (Institut fiziki SO AN SSSR)

TITLE: Epitaxial growing of Ag and Ni films in cathode deposition on NaCl crystals split in vacuum

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1635-1636

TOPIC TAGS: epitaxial growing, crystal growth, xenon, metal vapor deposition, silver

ABSTRACT: The nature of epitaxial growing of Ag and Ni films on NaCl crystals in vacuum was examined with various methods of deposition; the deposition rate varied from 1 to 5 Å/sec. The vacuum chamber was first evacuated to $2 \cdot 10^{-5}$ mm Hg; the pressure was then raised by introducing Xe to the vacuum chamber, raising the pressure to $5 \cdot 10^{-3}$ mm Hg. It was found that cathode deposition on an atomically-pure surface is rather difficult because of the low vacuum and the low deposition rate and that crystal contamination accounts for failures in monocrystalline films growth when crystals are split in the air. The ionization of molecules and atoms of gases in the deposition chamber apparently contributes to it. At equal deposition rates, the method of metal deposition has no appreciable influence upon the epitaxial growing of the films. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 11Dec65/ ORIG REF: 001

Card 1/1 avm

EWT(m)/EWP(t)/ETI IJP(c) JD/HM
ACC NR: AP6029127 SOURCE CODE: UR/0048/66/030/006/1035/1037

AUTHOR: Kirenskiy, L.V.; Sukhanova, R.V.; Kan, S.V.; Pyn'ko, V.G.; Sivkov, N. I.

ORG: Institute of Physics, Siberian Section, Academy of Sciences, SSSR (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk Pedagogic Institute (Krasnoyarskiy pedagogicheskiy institut)

TITLE: Fine magnetic structure of the domains in iron-nickel films /Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 1035-1037

TOPIC TAGS: permalloy, magnetic thin film, magnetic structure, magnetic domain structure, METAL FILM

ABSTRACT: The authors have employed an electron microscope to investigate the fine magnetic structure of the domains (magnetization ripples) in films of nickel-iron alloy vacuum deposited at 10^{-4} mm Hg onto rock salt substrates. A series of films containing 80% Ni (in the initial mix) were deposited on substrates maintained during deposition at different temperatures between 50 and 200° C, and a second series of films containing from 40 to 90% Ni were deposited on substrates maintained at 100° C. Fine magnetic structure and magnetization ripples were observed in both series of films. In the 80% Ni film deposited at 160° the crystallite size was 590 Å, the wavelength of

Card 1/2

L 08760-67

ACC NR: AP6029127

the magnetization ripples was 1.25 micron, and the angular amplitude of the magnetization oscillations was 8.5°. With increasing substrate temperature during deposition, both crystallite size and the magnetization ripple wavelength increased, the latter reaching 2.5 micron at a substrate temperature of 200°. The films deposited on 100° substrates all showed fine magnetic structure and magnetization ripples. Even the film containing 76% Ni, whose crystal anisotropy should be zero, had ripples; this is ascribed to composition fluctuations giving rise to regions of local crystal anisotropy. The magnetization ripple wavelength in this series of films was strongly correlated with the coercive force, both passing through a minimum at the same composition (80% Ni). A single-crystal film (80% Ni) was also investigated. This film had biaxial magnetic anisotropy and also exhibited magnetization ripples with a wavelength of 1.35 micron. The magnetization ripples in the single-crystal film were found significantly to affect the process of quasistatic magnetization switching in it. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 007

Card 2/2 bc

EWT(m)/EWP(t)/ETI IJP(c) JD/HM

ACC NR: AP6029128 SOURCE CODE: UR/0048/66/030/006/1038/1041

AUTHOR: Kirenskiy, L.V.; Sukhanova, R.V.; Kan, S.V.; Pyn'ko, V.G.; Komalov, A.S. 4/5

ORG: Institute of Physics, Siberian Section, Academy of Sciences, SSSR (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk Pedagogic Institute (Krasnoyarskiy pedagogicheskiy institut)

TITLE: Fine magnetic structure of the domains in iron, nickel, and cobalt films /Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 1038-1041

TOPIC TAGS: magnetic thin film, iron, cobalt, nickel, magnetic structure, magnetic domain structure, magnetic coercive force, METAL FILM

ABSTRACT: The authors have investigated the fine magnetic structure of the domains (magnetization ripples) of iron, nickel, and cobalt films vacuum deposited at 10^{-4} mm Hg onto rock salt substrates maintained during deposition at temperatures between 30 and 250° C. Films were obtained whose crystallites had average linear dimensions ranging from 110 to 1200 Å, and the transition from polycrystalline to single-crystal structure was observed. Unlike the single-crystal films, the polycrystalline films always exhibited fine magnetic structure of the domains. Linear relations were found

Card 1/2

L 08761-67
ACC NR: AP6029128

to obtain in all three metals between the wavelength of the magnetization ripples and the linear dimensions of the crystallites, and between the magnetization ripple wavelength and the coercive force. The magnetization ripple wavelength increased with increasing grain size and with increasing coercive force. Both uniaxial and isotropic films were investigated, and both showed well developed magnetic fine structure. The authors, therefore, cannot agree with E.Fuchs (Z. angew. Phys., 14, 203 (1962)) and others who assert that magnetization ripples are due to superposition of uniaxial anisotropy onto crystal anisotropy; uniaxial anisotropy, rather, can only affect the amplitude of the magnetization vector oscillations. The effect of quasistatic magnetization switching on the magnetic fine structure was investigated. In general, the switching process begins with a change in the fine structure owing to rotation of the magnetization and reversal of the walls of the ripples, and ends with a sudden reorganization of the whole structure or with a shift of the walls that have been formed. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 007

Card 2/2 bc

L 09128-67 EWT(m)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6032617 SOURCE CODE: UR/0126/66/022/003/0380/0391 47

AUTHOR: Kirenskiy, L. V.; Pyn'ko, V. G.; Sukhanova, R. V.; Sivkov, N. I.; Pyn'ko, G. P.; Edel'man, I. S.; Komalov, A. S.; Kan, S. V.; Syrova, N. I.; Zvegintsev, A. G.

ORG: Institute of Physics SO AN SSSR (Institut fiziki SO AN SSSR); Krasnoyarsk Pedagogical Institute (Krasnoyarskiy pedinstitut)

TITLE: Epitaxial films of iron, nickel and cobalt [report presented at the Conference on Physics of Ferro- and Antiferromagnetism, Sverdlovsk, 5-7 July 1965]

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 3, 1966, 380-391

TOPIC TAGS: magnetic anisotropy, epitaxial growing, hysteresis loop, metal film

ABSTRACT: The authors study the epitaxial growth of iron, nickel and cobalt films thermally vaporized onto ionic crystals split in air and in a vacuum. It is shown that when the substrates are heated in a vacuum of 10^{-4} mm Hg, the surface state is changed with a favorable effect on epitaxy. The phase composition of the film may be controlled by proper selection of the substrate. The fields of anisotropy of the films are measured and the effect which application of a magnetic field during vaporization has on the magnetic anisotropy of the films is studied. The domain structure of the films and its dynamics are analyzed and the results are used as a basis for explaining the shape of hysteresis loops. The coercive force is measured in films of various thickness. It is shown that the coercive force of the films is always much less than the field of anisotropy and is approximately inversely proportional to the saturation magnetization. Orig. art. has: 13 figures, 1 table, 5 formulas.

SUB CODE: 11, 20/ SUBM DATE: 30Jul65/ ORIG REF: 004/ OTH REF: 007

Card 1/1 nst UDC: 539.216.25:538.221

PYPINA, I.M.; DAVYDOV, S.U.

Smallpox morbidity in the world in 1960-1964. Vop. virus. 10 no. 6:643-648 N-D '65 (MIRA 19:1)

1. Protivochumnaya laboratoriya Ministerstva zdravookhraneniya SSSR, Moskva. Submitted April 14, 1965.

PYPINA, I.M.

Sanitary protection of the borders and the present epidemiological situation. Zhur. mikrobiol. epid. i immun. 31 no. 10:89-94 O '60. (MIRA 13:12)

1. Iz Gosudarstvennoy sanitarnoy inspektsii Ministerstva zdravookhraneniya SSSR.

(EPIDEMIOLOGY)

SOV/81-59-8-28430

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 406 (USSR)

AUTHORS: Smolyan, Z.S., Kurdyumova, N.A., Pyryalova, P.S.

TITLE: The Low-Temperature Chlorination of Ethane in the Presence of Initiators

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 1, pp 187 - 189

ABSTRACT: It has been shown that the chlorination of ethane at temperatures of 65 - 70°C in a medium of CCl_4 containing about 1 mol. % of dinitrile of the azoisobutyric acid (I), benzoyl peroxide (II) or dimethylpercarbonate (III), leads to the formation of C_2H_5Cl and polychlorosubstituted ethane. I, II and III play the role of reaction initiators forming active radicals in the temperature range indicated which start the development of the chain process. The conversion of ethane in the presence of initiators at a ratio of $Cl_2 : C_2H_6 = 1 : 2.5$ is about 30%, and at a ratio of 1 : 1.7 it is about 60%. II is an initiator of more long-lasting action producing the largest quantity of C_2H_5Cl. The diagram of a laboratory installation for chlorination is presented.

O. Chemtsov

Card 1/1

PYSHINA, S.P.

USSR/Human and Animal Physiology - The Nervous System. V-10

Abs Jour : Ref Zhur - Biol., No 2, 1958, 9070

Author : S.P. Pyshina
Inst : -
Title : The Effect of ACTH on Higher Nervous Activity in the Dog

Orig Pub : Fiziol. zhurnal SSSR, 1956, 42, No 11, 931-938

Abstract : ACTH in doses of 1 unit per 2-10 kg of body weight strengthened excitatory and inhibitory processes in the cerebral cortex and their concentration. Prolonged use or an increased dose of ACTH led to the development of maximum inhibition. ACTH had a prolonged aftereffect.

Card 1/1

PYNIN, N. (g. Kalinin).

Students at the wheel. Za rul. 15 no.5:19 My '57. (MLRA 10:6)
(Juvenile automobile drivers)

MATUSEVICH, N.I.; PYRYAYEV, N.K.

Effect of sodium carbonate on calcium molybdate and synthetic powellite. Obog.rud 3 no.4:24-27 '58. (MIRA 12:2)
(Hydrometallurgy) (Calcium molybdate) (Molybdenum)

VORONOV, V.I., inzh.; PYMEYEV, G.S., inzh.

Apparatus for controlling stresses in rod reinforcements. Bet. i zhel.-bet. no.11:525-526 N '60. (MIRA 13:11)
(Prestressed concrete)

KIRENSKIY, L.V.; FYN'KO, V.G.; SUKHANOVA, R.V.; FYN'KO, G.P.

Domain structure of cobalt films grown on NaCl crystals.
Izv. AN SSSR. Ser.fiz. 30 no.1:34-36 Ja '66.
(MIRA 19:1)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR.

M

USSR/Cultivated Plants. Fodder Plants.

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68242

Author : Pynzar', S., Khorash, N.
Inst : Kishenev Agricultural Institute.
Title : Sowing Corn Mixed with Dolichos.

Orig Pub : Agrikultura shi veteritul Moldovey, 1957, No 5, 46-49

Abstract : In 1955, at the experiment station of the Kishenev Agricultural Institute four varieties of corn were tested in mixed sowings with the cow bean dolichos (Kishinev climbing variety. The following corn varieties were used: Moldavian orange, Lining, Kishinev white siliceous, and Cinquantine. Dolichos planted with the late-maturing corn strain, Lining, produced the lar-

Card : 1/2

PYNZAR', S.L. kand.sel'skokhozyaystvennykh nauk

Botanical and varietal classification of soybeans in Moldavia, their biological characteristics and improvement through breeding. Trudy Kish. sel'khoz. inst. 3:5-22 '55. (MIRA 11:7)
(Moldavia--Soybean)

PYNZAR', S. L.

Dissertation: "Botanical and Variety Composition of the Moldavian Soybean, Its Biological Characteristics and Selective Improvement." Cand Agr Sci, Kishinev Agricultural Inst, imeni M. V. Frunze, 25 Jun 54. (Sovetskaya Moldaviya, Kishinev, 15 Jun 54)

SO: SUM 318, 23 Dec 1954

PYPA, I.S. (Krasnaya sloboda, Cherkasskaya obl., UkrSSR)

Tubers on potato stalks. Priroda 53 no.5:122 '64.
(MIRA 17:5)

NIKOLAYEV, N.I., otv. red.; LENSKAYA, G.N., zam. otv. red.; PASTUKHOV, B.N., zam. otv. red.; FENYUK, B.K., zam. otv. red.; ISHUNINA, T.I., red.; AKIYEV, A.K., red.; DOMARADSKIY, I.V., red.; DROZHEVKINA, M.S., red.; ZHOVTYY, I.F., red.; KOROBKOVA, Ye.I., red.; KRAMINSKIY, V.A., red.; KRATINOV, A.G., red.; LEVI, M.I., red.; LOBANOV, V.N., red.; MIRONOV, N.P., red.; PETROV, V.S., red.; PLANKINA, Z.A., red.; PYPINA, I.M., red.; SMIRNOV, S.M., red.; TER-VARTANOV, V.N., red.; TIFLOV, V.Ye., red.; FEDOROV, V.N., red.; PARNES, Ya.A., red.; PRONINA, N.D., tekhn. red.

[Especially dangerous natural focus infections] Osobo opasnye i prirodnoochagovye infektsii; sbornik nauchnykh rabot protivochumnykh uchrezhdenii. Moskva, Medgiz, 1962. 271 p.
(MIRA 16:5)

(COMMUNICABLE DISEASES)

PYPINA, I.M.; KOTINA, R.I.; TIMAKOV, V.D., professor, direktor.

Preliminary data on sources of dysentery and ways in which it spreads in microsectors. Zhur.mikrobiol.epid.i immun. no.7:34-40 Jl '53. (MLRA 6:9)

1. Institut epidemiologii i mikrobiologii imeni pochetnogo akademika N.F. Gamalei Akademii meditsinskikh nauk SSSR. (Dysentery)

PYPINA, I.M., vrach

Forgotten but not gone. Zdorov'e 3 no.7:22 Jl '57. (MLRA 10:8)
(COMMUNICABLE DISEASES--PREVENTION)

PYRAK, Mieczyslaw

Conference of the Association of Polish Mechanical Engineers and Technicians on universal jigs and fixtures from standard sets of parts. Normalizacja 30 no. 3:125-127. March '62.

PYRAKHIN, A.A., inzh.

Is there any necessity to transfer the linear disconnecting switch of a 10 kv. tower substation to the transmission line end stand. Energetik 8 no.1:23-24 Ja '60. (MIRA 13:5)

(Electric circuit breakers)

NIKOLAU, K. [Nicolau, K.]; IALOMITSANU, M. [Jalomiciamu, M.]; POPPA, Ch. [Poppa, C.]; PYRBU, R.; IONESKU, M. [Jonescu, M.]

Treatment of acute hemorrhage by means of intra-arterial centripetal transfusion of dextran with subsequent intravenous blood transfusion. Probl. gemat. i perel. krovi 5 no. 8:32-34 Ag '60. (MIRA 14:5)
(HEMORRHAGE) (DEXTRAN) (BLOOD—TRANSFUSION)

PYREGOV, B.V.

Clamp device used in machines for finish shelling of pencils.
Der.prom. 8 no.4:24 Ap '59. (MIRA 12:6)

1. Fanernyy kombinat "Krasnyy yakor'."
(Woodwork)

PYRIG, L.A.

Treatment of chronic colitis at the "Morshin" Health Resort. Vrach. delo no.8:135-136 Ag '60. (MIRA 13:9)

1. Kurort Morshin, sanatoriy "Mramornyy dvorets".
(COLITIS) (MORSHIN—HEALTH RESORTS, WATERING PLACES, ETC.)

PYRIG, L.A. (Kiyev)

Elimination of neutral red by the stomach mucosa during hormonal therapy of patients with rheumatism and infectious nonspecific polyarthritis. Vrach. delo no.11:37-41 N '61. (MIRA 14:11)

1. Otdel klinicheskoy farmakologii i funktsional'noy terapii (zav. - zasluzhennyy deyatel' nauki prof. A.L.Mikhnev) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni akademika N.D.Strazhesko.
(ARTHRITIS, RHEUMATOID) (RHEUMATISM)

PYRIG, L.A.

Secretory function of the stomach during the treatment of rheumatic polyarthritis with ACTH hormone and steroid hormones. Vrach. delo no. 1:76-80 '61. (MIRA 14:4)

1. Otdel klinicheskoy farmakologii (zav. - zasl. deyatel' nauki, prof. A.L. Mikhnev) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni akademika N.D. Strazhesko.
(STOMACH--SECRETIONS) (RHEUMATIC FEVER) (ACTH)

VELICHKOVSKIY, P.I., ~~PYRIG, L.A.~~

Home use of "Bonifatsii" mineral water from Morshin. Vrach. (MIRA 11:7)
delo no.5:535 My '58

1. Sanatoriy "Mramornyy dvorets" kurorta Morshin.
(MINERAL WATERS)

PYRIG, L.P.

Some problems concerning the functional state of the stomach during hormone therapy of rheumatic fever and infectious non-specific polyarthritis. Vop. revm. 2 no.2:56-62 Ap-Je'62 (MIRA 17:3)

1. Iz otdela klinicheskoy farmakologii i funktsional'noy terapii (zav. - zasluzhennyy deyatel' nauki prof. A.L. Mikhnev) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni N.D. Strazhesko.

TOLOPKO, D.K.; MOKRIVSKIY, T.M. [Mokrivs'kyi, T.M.]; YURZHENKO, T.I.; PYRIG, Ya.M. [Pyrih, IA.M.]

Using the continuous method for the production of acryl chloride. Khim.prom. [Ukr.] no.2:14-16 Ap-Je '65. (MIRA 18:6)

H-28

GDR / Chemical Technology. Food Industry.

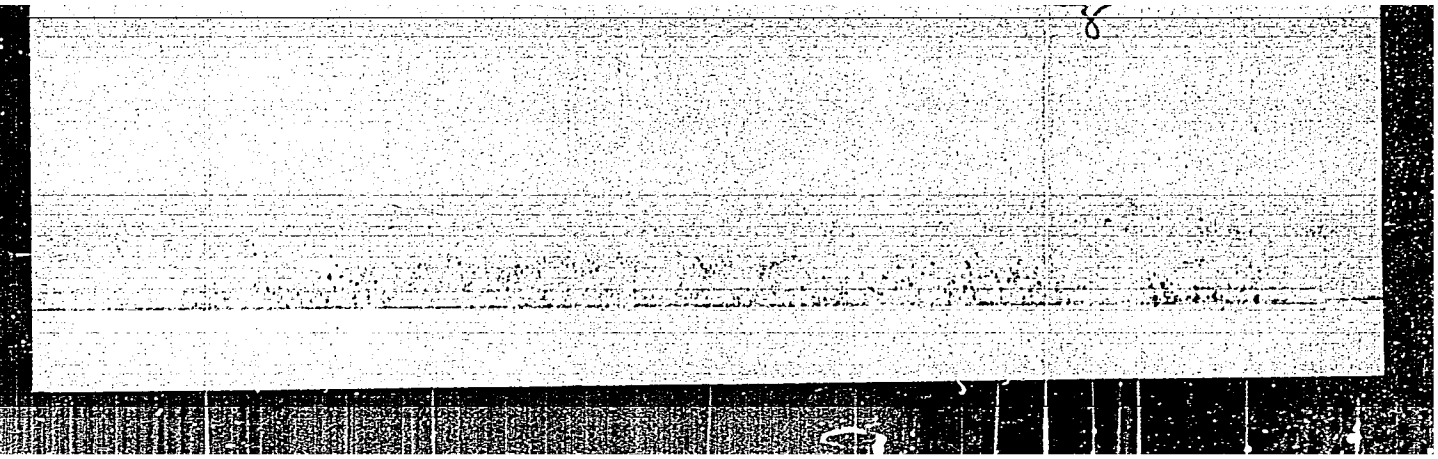
Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79497.

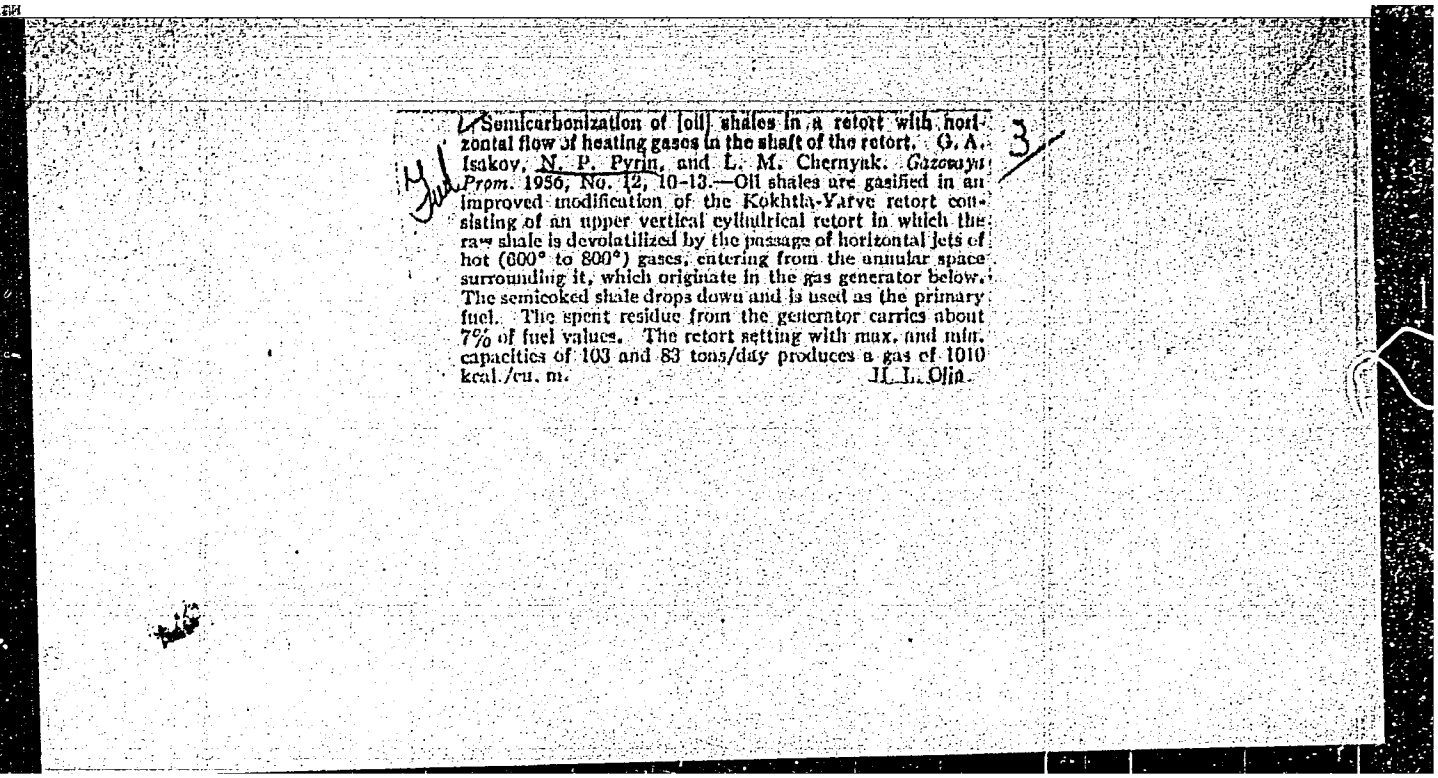
Author : Pyriki, C.
Inst : Not given.
Title : Analysis of Tobacco, in Particular the Chromatography of Alkaloids.

Orig Pub: Nahrung, 1957, 1, No 2, 114-125.

Abstract: Factors are mentioned which influence the chemical composition of various tobacco and the correlation between a grade of tobacco and its utilization. A critical survey is given on the methods being used for the quantitative determination of tobacco components for the purpose of evaluating its quality objectively. The application of a chromatographic method in the analyses of tobacco is discussed, particularly in the case of

Card 1/2





Semicarbonization of [oil] shales in a retort with horizontal flow of heating gases in the shaft of the retort. G. A. Isakov, N. P. Pyrin, and L. M. Chernyak. *Gazovaya Prom.* 1956, No. 12, 10–13.—Oil shales are gasified in an improved modification of the Kokhtla-Yarve retort consisting of an upper vertical cylindrical retort in which the raw shale is devolatilized by the passage of horizontal jets of hot (600° to 800°) gases, entering from the annular space surrounding it, which originate in the gas generator below. The semicoked shale drops down and is used as the primary fuel. The spent residue from the generator carries about 7% of fuel values. The retort setting with max. and min. capacities of 103 and 83 tons/day produces a gas of 1010 kcal./cu. m. JL L. Ofin

DVORETSKAYA, Ye.I.; PYRINA, I.G.; PROKTISTOVA, O.I.

Physiological nature of the resistance of tomato plants to leaf mold. Biokhim.pl. i ovoshch. no.5:165-194 '59. (MIRA 13:1)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Tomatoes--Disease and pest resistance)

PYRINA, I.L.

Underwater intergrating photometer. Gidrobiol. zhur. 1 no.2: 61-67 '65. (MIRA 18:6)

1. Institut biologii vnutrennikh vod AN SSSR, Borok.

PYRINA, I.L.

Preliminary results of spectrophotometric determination of pigments in freshwater phytoplankton. Trudy Inst. biol. vnutr. vod no.6:51-59 '63. (MIRA 18:1)

DVORETSKAYA, Ye.I.; KOST, A.N.; PYRINA, I.L.

Effect of some hydrazine derivatives on the causative agents of tomato-leaf mold (Cladosporium fulvum Cooke). Nauch. dokl. vys. shkoly; biol. nauki no.2:115-124 '58. (MIRA 11:10)

1. Predstavlena kafedrami fiziologii rasteniy i organicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M.V. Lononosova.
(Tomatoes--Diseases and pests) (Acetone) (Pyridazone)

PYEINA, I.L.

Intensity of photosynthesis in algae as related to seasonal light conditions. Trudy Inst. biol. vodokhran. no.1:102-109 '59.
(MIRA 13:2)

(Algae) (Photosynthesis)

A. C. S.

Chemistry + Physics

Determination of cadmium and mercury with pyridine. I. P. Ryabikov and M. V. Pyrogova. *Uchenye Zapiski Saratov. Gosudarst. Univ.*, 25 [4] 123-33 (1940); *Khim. Referat. Zhur.*, 4 [3] 88 (1941).—The authors investigated the precipitation of Cd and Hg as pyridine complexes. To transform the precipitate into such state that it could be weighed, the following methods were tried: (1) that of Dick, consisting in washing the precipitate with alcohol and ether, and (2) that of drying the precipitate in vacuo. The Cd was precipitated as $[CdPy_2](SCN)_2$. The Cd found deviated from the amounts taken by 0.09 to 0.26%. The Hg was precipitated according to Spac as $[HgPy_2][Cr_2O_7]$ and according to Lang as $HgCl_2Py$. The deviations by the first method were 0.08 to 0.3% and by the second method 0.02 to 0.19%. To separate Cd and Hg, the latter is precipitated by the Lang method as $HgCl_2Py$. In the filtrate the Cd is precipitated by the Spac method as $[CdPy_2](SCN)_2$. In such determinations, the deviations for Hg were 0.06 to 1.80% and for Cd 0.04 to 1.88%. M.Ho.

JANOTA-BASSALIK, Ludmila; PYRKA, Krystyna

Optimum conditions for the utilization of oxalates by Flavobacterium extorquens bassalik. Acta microb. polon. 10 no.3:239-248 '61.

1. From the Department of Plant Physiology, University of Warsaw, Poland.

(FLAVOBACTERIUM metab) (OXALATES metab)

PYRKH, G.N., inzh.

Using a magnetic pulse generator for sorting ferrite rings. (MIRA 18:7)
Priborostroenie no.6:24-25 Je '65.

PYRKIN,G., inzhener-polkovnik

Course in topography. Voen. znan. 31 no.3:17-18 Mr '55.
(Maps) (MLRA 8:7)

PYRKIN, G.I.

Data on the graduation of correspondence students from the technical school. Geod. i kart. no.8:59-62 Ag '63. (MIRA 16:9)
(Surveying--Study and teaching)
(Correspondence schools and courses)

PYRKIN, Yu.G.

Papers submitted for the 10th Pacfic Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

MAGIBINA, M. S., Institute of Geology - "Mesozoic depressions and troughs
of east Asiatic type and their position in the systematics of tectonic
forms" (Section VII.C)
MELEPO, B. A., Moscow State University, Physical Faculty - "The gamma-ray
spectrometric measurements of artificial radioactivity in upper layers
of the ocean" (Section VII.B.6)
MESTEROV, V. G., Chair of Forestry, The Agricultural Academy imeni K. A.
Timiryazev - "Forest fire research and methods of fire control" (Section V.B)
OSTROUMOVA, T. A., Institute of Oceanology - "Biogeographical and
morphological analysis of reproduction and development of flatfish
in the seas of the northwest Pacific" (Section III.C)
OZMIDOV, R. V., Institute of Oceanology - "Investigation of the horizontal
turbulent exchange in the Pacific Ocean" (Section VII.B)
PARIN, N. V., Institute of Oceanology - "Regularities in the geographical
distribution of flying fishes in the Pacific Ocean" (Section VII.C)
PERGAMENT, M. A., Institute of Geology - "Stratigraphic horizons in the
cretaceous deposits of Kamchatka" (Section VII.C)
PETELIN, V. P., Institute of Oceanology - "The processes of recent sedi-
mentation in the western part of the equatorial zone in the Pacific"
(Section VII.C.1)
PETRUSHEVSKIY, B. A., Institute of Earth Physics imeni O. Yu. Schmidt -
"The seismic geological conditions in the northwestern outlying area
of the Pacific basin" (Section VII.C.2)
PONOMAREVA, L. A., Institute of Oceanology - "Euphausiidae in the
northern part of the Pacific" (Section III.C)
PORTENKO, L. A., Institute of Zoology - "The problem of the Bering land
bridge from the zoological point of view" (Section III.A.8.a)
PUSHCHAROVSKIY, Yu. M., Institute of Geology - "Some specific features
in the tectonics of the north part of the Pacific belt" (Section VII.C)
PYRKIN, Yu.G., Moscow State University, Physical Faculty - "A new deep-sea
device for recording currents ('MGU')" (Section VII.B.5)
RADKEVICH, Ye. A., Institute of Geology - "On the stability and
inheritance of structural elements in the frame of the Pacific Ocean
depression" (Section VII.C)
RASS, T. S., OSTROUMOVA, T. A., and GORDEYEVA, N. N., Institute of
Oceanology - "Geographical regularities in regard to reproduction and
development of mass fishes in the northern part of the Pacific"
(Section III.C)
ROMANKEVICH, Ye. A., Institute of Oceanology - "Organic substance in
bottom sediments in the western part of the Pacific" (Section VII.C.1)
RUDICH, Ye. N., Institute of Earth Physics imeni O. Yu. Schmidt -
"Relations between deep focus earthquakes in the eastern margin of
Asia and large structures of the earth crust" (Section VII.C.2)
RYABCHIKOV, A.M., Moscow State University, Geographical Faculty - "The
structure of natural zonatic in east Asia" (Section VI.C)
RYKUNOV, L. N., Moscow State University, Physical Faculty, Chair of Hard
Crust - "The correlative method for studying microseism" (Section VII.C.2)
SAYDOVA, Kh. M., Institute of Oceanology - "The distribution of bottom
lime Foraminifera in the northern part of the Pacific and its use for
the reshaping of the paleorelief" (Section VII.C.1)
SAMOYLENKO, V. S., Institute of Oceanology - "Problems concerned with the
theory of formation of the temperature regime in seas and oceans"
(Section VII.A)
SEMINA, G. I., Institute of Oceanology - "Biogeographical zonation of the
Pacific Ocean in regard to phytoplankton" (Section III.A)
SEROVA, M. Ya., Institute of Geology - "Paleogene Formanifers of Kamchatka"
(Section VII.C)
SAVILOV, A. I. SAVILEV, A. I., Institute of Oceanology - "Velella and Physalia in the
pleiston of the Pacific" (Section III.C)
SHEYNMANN, M., Institute of Earth Physics imeni O. Yu. Schmidt -
"Mechanism of ocean-magmas (?) origin" (Section VII.C.2)
SHOSHIN, A. A., The Central Organization of Leningrad - "The main problems
of human illness geography and their significance for prophylactic
medicine" (Section VII.B.4)
SHUMSKIY, P. A., Institute of Permafrost Studies - "Glaciology of
Antarctica" (Section VII.D.1)
SYSOYEV, N. N., Institute of Oceanology - "Methods for measuring deep
currents in the ocean and some results of their application in the
Pacific Ocean" (Section VII.B.5)

Pyrkin, Yu. G.

49-58-3-16/19

AUTHORS: Kolesnikov, A.G., Panteleyev, N.A., Pyrkin, Yu.G., Petrov, V.P., and Ivanov, V.N.

TITLE: Apparatus and Methods of Measuring Micro-Pulsations of Temperature and Flow-Rate in the Sea (Apparatura i metodika registratsii turbulentnykh mikropul'satsiy temperatury i skorosti techeniya v more)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 3, pp 405-413 (USSR)

ABSTRACT: The instruments usually employed in measuring temperature, etc., in the sea have so long a period that they only measure averages. For the study of turbulent processes (e.g., turbulent heat flow, viscosity, etc.) it is necessary to have instruments with a short enough period. Temperature measurement is usually carried out either with a thermocouple or a resistance thermometer. The former measures the difference between the actual and the average temperature, whilst the latter measures also the actual temperature. The authors describe experiments of Urick and Searfoss (1948), Liebermann (1951), Kontoboytseva (1958) and English (1953) on temperature measurements, and ones by Bowden and Fairbairn (1952, 1956) and Obukhov (1951) on rate-of-flow measurements. The authors then discuss the basis of a new apparatus. The

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Apparatus and Methods of Measuring Micro-Pulsations of Temperature and Flow-Rate in the Sea.

time constant must be less than 0.1 sec for the whole apparatus. The accuracy of measurement of temperature in a sea where the surface is ice-free must be ~0.001-0.005°C; if ice is present the required accuracy goes up to 0.0001°C. The accuracy of velocity measurements must be not less than 2-5 mm/sec for an ice-free sea and not less than 0.1 mm/sec for a sea shielded from wind effects by ice. To obtain correct recordings with the required accuracy, the whole apparatus must be stationary. The authors now describe their actual apparatus. The meter consists of measuring devices at two different levels, a distributing and balancing network, an amplifier and an oscillograph. The measuring device at the upper level has three constituents: for measuring true velocity, true temperature, and the modulus of the velocity vector and the vertical component of the velocity vector. At the lower level, true velocity and true temperature are measured. Hence the meter records simultaneously: average temperature, the gradient of the average temperature; temperature pulsations average velocity and the

Apparatus and Methods of Measuring Micro-Pulsations of Temperature and Flow-Rate in the Sea.

gradient of the average velocity, pulsations of the modulus of the velocity vector and pulsations of its vertical component. Velocity signals go straight to the oscillograph; whilst temperature signals go to the oscillograph via a Wheatstone bridge and an amplifier. Power is supplied by the constant current from an accumulator. Temperature measurements were carried out with a thermistor with a temperature coefficient of resistance of 3-4% and a period of 0.08 sec. This was placed in one arm of the Wheatstone bridge. The power supplied to the thermistor was so chosen that the desired accuracy of 0.001°C could be obtained. Small deviations from the average velocity give diminished thermistor readings if the electric current is diminished or the average velocity increased. The device for measuring the average flow velocity consists of a 0.1 mm diameter, 28 mm long platinum wire, which is included in a bridge system. The wire is stretched perpendicular to the stream flow. Measurements are made at a constant current of 1-5 amps depending on the velocity. The device for measuring the modulus of the velocity vector and of the vertical component has two platinum wires in the bridge system. They are set at right

Apparatus and Methods of Measuring Micro-Pulsations of Temperature and Flow-Rate in the Sea.

angles to each other; their bisector is in the direction of the current and lies in the vertical plane. Vertical components of flow are measured by the resultant asymmetry of the system with respect to the flow. The meter altogether consists of two parts, both of which are attached to different parts of a steel cable at a vertical distance apart of from 0.5 to 2.0 m. The basic part (which can move freely round a vertical axis) is at the top. A vane keeps the apparatus oriented into the current. The measuring elements are placed at the front to reduce the effect of disturbance. All but 5-6 mm of the thermistor are enclosed in an ebony casing from which leads run back through a tube to the centre of the apparatus. A lead counterweight is employed to keep the meter horizontal. The measuring elements are protected from mechanical damage by a wire grid. The temperature measurer was graduated in the interval 5.0-30.0°C with a Beckmann thermometer for different currents in the thermistor. The velocity measurer was graduated in the range 0-50 cm/sec.

49-58-3-16/19

Apparatus and Methods of Measuring Micro-Pulsations of Temperature and Flow-Rate in the Sea.

The instrument is let down from a winch. After it has been kept at the right depth for 3-5 minutes the oscillograph is switched on and measurements are made. The authors give examples of oscillograms obtained and their interpretation. They assert that the meter seems well adapted for measurements on turbulence. There are 11 figures and 7 references, of which 5 are English and 2 Russian.

ASSOCIATION: Moscow State University imeni M.V. Lomonosov (Moskovskiy gosudarstvennyy yniversitet im. M.V.Lomonosova)

SUBMITTED: March 19, 1957.

AVAILABLE: Library of Congress.

Card 5/5

S/169/62/000/011/058/077
D228/D307

AUTHOR: Pyrkin, Yu.G.

TITLE: Autonomous electric turntable for recording deep current velocities

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 5-6, abstract 11V36 (Geofiz. byul., Mezhduved. geofiz. kom-t pri Prezidiume AN SSSR, no. 11, 1962, 43-46)

TEXT: The device was prepared at MGU (Moscow State University) in the Kafedra fiziki morya i vod sushi (Department of Sea and Land Water Physics) and is a metallic container, inside which is placed the recording device. This consists of an illuminator, a tape winder, an electrocontact clock, and storage batteries. The current velocity is fixed by a cup-shaped dial with a photo-optical attachment for recording the rotation according to the last reading of the instrument. Light from the illuminator is reflected from a mirror (there are 2 on the turntable's axis) through a prism and narrow slit and strobes a moving film (rate of 0.4 mm/sec) each

Card 1/2

ACC NR: AP7001883 (N) SOURCE CODE: UR/0362/66/002/012/1316/1317

AUTHOR: Pyrkin, Yu. G.

ORG: Moscow State University (Moskovskiy gosudarstvennyy universitet)

TITLE: Measuring the velocity of natural currents in the Atlantic Ocean

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 12, 1966, 1316-1317

TOPIC TAGS: ocean current, research ship, oxygen, velocity measuring instrument

ABSTRACT: Problems in measuring currents in the ocean involve the need of a device for automatic measurements at great depths (5000--7000 m) and the need for setting these self-reading devices at fixed and precisely determined levels. Members of the Physics Department at the Moscow State University (MGU) have developed, and have used for several years, a deep-water, automatic, electric current meter, previously described by the author (Avtonomnaya elektrovertushka dlya registratsii skorosti glubinnykh techeniy, Geofizich. byull., No. 11, 1962). It records coefficients of velocity and, unlike other current meters now in use, it permits determination with good accuracy of the time intervals between measurements and of the vertical distribution of currents. It may be used at any depth down to 10 000 m. Tests of the instrument were made during the 13th traverse of the research ship Mikhail Lomonosov (1963). Measurements were taken in the equatorial zone of the Atlantic, and were

Card 1/2 UDC: 551.465.558

ACC NR: AP7001888

directed specifically at bottom currents. The results show a very thin layer of water (10--15 m) involved in the current at the depth investigated (4500 m). This fact is in agreement with determinations of oxygen distribution. Data are still inadequate for general conclusions, but it appears clear that bottom currents exist and that the velocities may reach 20 cm/sec. Orig. art. has: 1 figure.

SUB CODE: 08/ SUBM DATE: 13Jun66/ ORIG REF: 001/ OTH REF: 003

Card 2/2

S/081/62/000/024/026/052
B117/B186

AUTHORS: Czarnecki, Jerzy, Kwasnik, Jerzy, Lewinski, Tadeusz, Penczek, Piotr, Pyrko, Romuald

TITLE: Method for the production of nitrocellulose adhesives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24 (II), 1962, 892, abstract 24P559 (Zakłady Chemiczne "Pronit". Polish pat. 44675, May 17, 1961)

TEXT: Nitrocellulose (I) (nitrogen content 10.5 - 11 %) dehydrated with ethyl alcohol (II), concentration 80 - 90 %, or aqueous nitrocellulose containing ~30 % water, are used for producing adhesives. When using aqueous nitrocellulose, substances are added to the adhesive which either react with water or bind the adhesive in the form of crystal water ($MgSO_4$, Na_2SO_4, or $CaSO_4$). The total amount or part of (I) can be replaced by waste celluloid. The latter is first decomposed by boiling in water with pyridine or in pure water at 140°C under pressure. 94 % ethyl alcohol (II) containing benzene, toluene, and small amounts of ether, ketones, or high-boiling alcohols is used as a solvent for (I).

Card 1/2

Method for the production of ...

The total amount of solvent is less than 30 %. 0.1 - 1 % of some resins soluble in a mixture of (II) and aromatic hydrocarbons as well as surface-active substances can be added to the adhesive, improving the solubility of (I) and the penetration of the adhesive into porous material. Adhesives containing sulfates are used for inflexible material such as floorings or in musical instruments. Adhesives without sulfate are used for leather, textiles, paper, wood, and porcelain. Fillers such as chalk, gypsum, or kaolin (2-8 parts per part of (I)) may be added to adhesives used for flooring. The above adhesive is less expensive and less toxic than nitrocellulose-base adhesives dissolved in ether or ketones. It can be used for gluing materials that contain nitrocellulose without softening. Nondehydrated nitrocellulose may be used for producing this adhesive. [Abstracter's note: Complete translation.]

PENCZEK, Piotr; PYRKO, Romuald

Nitrocelluloid adhesives. Polimery 6 no.12:388-391 '61.

1. Instytut Tworzyw Sztucnych (for Penczek) 2. Zakladowe Laboratorium (for Pyrko)

L 24822-66 EWT(d)/EWT(m)/EWP(v)/EWP(j)/T/EWP(k)/EWP(h)/EWP(l)/ETC(m)-6

ACC NR: AP6006955 IJP(c) (N) WW/RM SOURCE CODE: UR/0381/65/000/006/0061/0068

AUTHORS: Lange, Yu. V.; Filimonov, S. A.; Shishkina, N. V.; Pakhomov, V. V.; Veremeyenko, S. V.; Pyrkov, B. Ye.

ORG: none

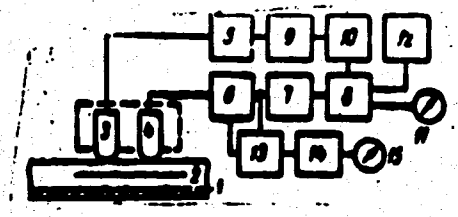
TITLE: UVFD-1 defectoscope for controlling multilayered structures and nonmetallic parts

SOURCE: Defektoskopiya, no. 6, 1965, 61-68

TOPIC TAGS: defectoscope, diagnostic instrument, electric device, electronic circuit /UVFD-1 defectoscope

ABSTRACT: The block diagram and detailed electric circuitry of a UVFD-1 defectoscope are given. Referring to Fig. 1,

Fig. 1. Block diagram of a UVFD-1 defectoscope.



Card 1/2 UDC: 620.179.16

L 24822-66

ACC NR: AP6006955

the defectoscope consists of: 1 - metallic base, 2 - nonmetallic film deposit, 3 - emitting oscillator, 4 - receiving oscillator, 5 - generator to feed power to the vibrator, 6 - amplifier, 7 - shaper, 8 - phase-measuring circuit, 9 - phase regulator, 10 - shaper, 11 - needle indicator, 12 - relay instrument, 13 - detector for automatic regulating of amplification, 14 - amplitude measuring device, and 15 - indicator. The instrument has four types of scanner heads that operate on a frequency range 25--60 kcycle. A sketch is included for one such scanner head connected to the instrument by a coaxial cable. The instrument weighs 11 kg and is portable. It is used in conjuction with automatic recorders and is very useful for controlling nonmetallic film deposits on metallic bases and for identifying defects between the joints of multilayer structures. Orig. art. has: 4 figures.

SUB CODE: 14, 09/ SUBM DATE: 16Jun65/ ORIG REF: 005

Card 2/2

PYRKOV, L. M.

Cand Chem Sci - (diss) "Development of methods of identifying block- and graft polymers. Study of interchain reactions in the presence of radicals." Moscow, 1961. 15 pp; (Academy of Sciences USSR, Inst of Petrochemical Synthesis); 230 copies; free; (KL, 6-61 sup, 199)

KOROTKOV, A.A.; SHIBAYEV, L.A.; PYRKOV, L.M.; ALDOSHIN, V.G.; FRENKEL', S.Ya.

Synthesis and study of hybrid polymers. Styrene and isoprene block-polymers obtained by catalytic polymerization in a solution under the action of butyllithium. Vysokom. soed. 1 no.3:443-454 Mr '59. (MIRA 12:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Styrene) (Isoprene)

L 40072-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6012417 (A) SOURCE CODE: UR/0183/65/000/006/0022/0026

AUTHOR: Sorokin, A. Ya.; Andreyeva, N. A.; Volkova, L. A.; Kol'tsov, A. I.; Rudakov, A. P.; Pyrkov, L. M.; Frenkel', S. Ya 57 B

ORG: IVS AN SSSR

TITLE: Correlation of structural and mechanical characteristics of polyvinyl alcohol fibers. Investigation of supermolecular arrangement in chemical fibers and means of increasing their strength

SOURCE: Khimicheskiye volokna, no. 6, 1965, 22-26

TOPIC TAGS: polyvinyl alcohol, synthetic fiber, polymer structure, elongation, rupture strength, correlation function, NMR, X ray analysis

ABSTRACT: The structural and mechanical properties of polyvinyl alcohol fibers were investigated using the range of thermoplasticized stretch as the controllable variable. Correlation between these properties was shown. Linear correlation was established between the overall orientation of the machromolecules in the fiber and orientation of the crystallites; between rupture strength and maximum relaxation stress, and also between these values and the reciprocal half-width reflection

UDC: 677.744.72

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L 40072-66

ACC NR: AP6012417

and the amount of elongation (up to 450% elongation tested). It was shown that the parameter ($\beta_{1/2}$) describes the previous history of the samples with respect to macromolecular orientation. NMR studies showed the basic conformation of the polyvinyl alcohol fiber macromolecules is flat trans-zigzag. A combination of different analytical methods (NMR, X-ray, isothermal heating) can be used to study in succession the structure formation processes at different stages of fiber formation. Orig. art. has: 4 equations, 8 figures and 2 tables.

SUB CODE: 07,11/ SUBM DATE: 09Jun64/ ORIG REF: 011/ OTH REF: 003

Card 2/2 11b

TOLSTOV, Yu.G., doktor tekhn.nauk; KARTASHOV, G.K., kand.tekhn.nauk; PYRKOV, V.V.

Model of a d.c. electric transmission system. Trudy MFTI no.4: 49-61 '59. (MIRA 13:9)

(Electric power distribution)
(Electric network analyzers)

SMOLYAN, Z.S.; PYRYALOVA, P.S.; KURDYUMOVA, N.A.

Progress in the field of chlorination of saturated hydrocarbons. Usp.khim. 29 no.1:23-54 Ja '60. (MIRA 13:6)

(Chlorination) (Hydrocarbons)

DUNIAMALYAN, V.S.; CHILINGAROVA, L.V.; PYRKOV, A.S.

Practice of improving the soda-sulfate Solonetz soils on the right bank of the Alazani Valley. Trudy Gruz NIIGiM no.21: 77-84 '60. (MIRA 16:1)

(Alazani Valley--Solonetz soils)
(Reclamation of land)

ACCESSION NR: AP4043767 S/0080/64/037/008/1802/1807

AUTHOR: Py*rkov, L.M.; Korzhavin, L.N.; Sorokin, A.Ya.; Frenkel', S.Ya.

TITLE: Preparation of concentrated solutions and the removal of air in an atmosphere of solvent vapors

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 8, 1964, 1802-1807

TOPIC TAGS: solvent vapor, concentrated solution, polyvinyl alcohol, synthetic fiber, spinning, polyacrilonitrile, dimethylformamide, polymer

ABSTRACT: The authors describe a simple laboratory method for the removal of air from spinning solutions of polyvinyl alcohol (PVS) and polyacrilonitrile (PAN). This method can be easily adapted for other systems and technological conditions. Both solutions were prepared in a laboratory device. The initial components of the solution were introduced into a container which was placed inside a larger container filled with solvent and equipped with an electric heating element. The solution container was covered by an isolating glass cover. The cover had one opening for the introduction of nitrogen and another for a thermometer. The glass cover has a bottle neck which contains a bearing and a mixer with a waterproof seal. A nitrogen flux is injected during a period of 5-10 minutes. Then the solvent is poured into

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ACCESSION NR: AP4043767

the isolating cover and the nitrogen bubbles through it for a certain period of time. After that the entire system is heated to the required temperature while the water tight mixer stirs the solution without admitting air. A complete solution of PVS can be achieved after 60-70 minutes at 100°C. A partial removal of air from the solution takes place during this process and a structural homogenuity of the solution is achieved. Spinning solutions of PAN in dimethylformamide were prepared analogeously at 60°C. Further removal of air from the solutions was carried out using a special suction device. The authors concluded that their air removal method can also be applied in the case of other polymer spinning solutions. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 03Mar63 ENCL: 00

SUB CODE: OC, MT NO REF SOV: 004 OTHER: 000

Card 2/2

L 32923-66 EWT(m)/EWP(j)/T RM/WW

ACC NR: AP6017599 (A) SOURCE CODE: UR/0183/66/000/001/0009/0010

AUTHOR: Kamalov, S. K.; Pyrkov, L. M.; Batrakova, T. V.; Sheremeteva, T. V. 33 32

ORG: IVS AN SSSR

TITLE: Effect which amidocitraconic acid and its N-alkyl derivatives have on the structural and mechanical properties of nitron fiber B

SOURCE: Khimcheskiye volokna, no. 1, 1966, 9-10

TOPIC TAGS: aliphatic dicarboxylic acid, alkyl radical, synthetic fiber, polyacrylonitrile, plasticizer

ABSTRACT: The authors study the strength of fibers as a function of their previous history and various structural parameters, in particular the overall orientation evaluated by isotrometric heating. The fibers tested were pure polyacrylonitrile containing 4 mol.% N-ethylamide of citraconic acid. Temperature-stress curves are given for isothermal heating of fibers subjected of identical plastification stretching and of fibers with identical strength but different compositions and molecular weights. Curves are also given showing the modulus of elasticity of the fibers as a function of temperature. Overall fiber orientation (determined from the maximum on the isothermal heating curves) increases in polyacrylonitrile fibers of equal strength as the concen-

UDC: 677.742.2

Card 1/2

S/074/63/032/003/001/002
A057/A126

AUTHORS: Pyrkov, L.M., Frenkel', S.Ya.

TITLE: Secondary reactions of the radical polymerization

PERIODICAL: Uspekhi khimii, v. 32, no. 3, 1963, 305 - 335

TEXT: A systematic discussion is given of the current information on secondary reactions in radical polymerization. Secondary reactions are defined by the present authors as: transformation of "dead" chains and macroradicals which occur in later stages of polymerization and start with the activations of intermediate links by a transfer of a chain to the polymer. The occurrence of secondary reactions can be studied only in some model systems where the single reactions can be "isolated". These separate types of reactions are discussed after introductory remarks in the present paper. The last chapter deals with methods for the registration and investigation of secondary reactions in model systems. Oxidation destruction of polymers is not discussed in the analysis of the secondary reaction - destruction of polymer chains. Another secondary reaction is the interchain exchange effected by: 1) macromolecular combination; 2) multiple

Card 1/3

Secondary reactions of the radical polymerization

destruction acts; and 3) the proper interchain exchange. The third secondary reaction discussed is the transfer of the kinetic chain to the polymer with subsequent growth of the side chain, which may occur with intermolecular transfer of the active center if the radical at the end attacks the methylene group of the same molecule (high-pressure polyethylene). Crosslinking of the macromolecule occurs in linear polymerization as secondary reaction at a shortage of the monomer, or at a relative high quantity of macroradicals. Intensive crosslinking with interchain exchange occurs in ω-polymerization. Three types of macroradical-recombination are assumed: head to head, head to side, and side to side. The most suitable method for determining secondary reactions is the determination of the distribution of molecular weight. Destruction can be controlled by measuring the viscosity, while determination of interchain exchange can be done by means of the distribution of molecular weight. The latter is also applicable to the control of the transfer of a kinetic chain to the polymer and the crosslinking of macromolecules. However, for investigations of secondary reactions model systems are more convenient in which reaction occurs more or less on its own. Isotope-tracer techniques are suitable for investigations of interchain exchange processes. For the study of the transfer of a kinetic chain the method of

Secondary reactions of the radical polymerization

G. Henrici-Olive, and S. Olive (J. Polymer Sci., v. 17, 1955, 45) is especially suitable. The most reliable determination of crosslinking is carried out by the measurement of distribution of molecular weight and "hybride polymers" prepared like in determining interchain exchange. Infra-red analysis, and sol-gel analysis may be used for investigations of secondary reactions in diene polymerization. There are 15 figures.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad (Institute of High-Molecular Compounds of the AS USSR, Leningrad)

L 57054-65/ EWP(j)/EWT(m)/T Pc-4 RM

ACCESSION NR: AP5013977 UR/0183/65/000/003/0002/0007

677.744.72

17
16
B

AUTHORS: Sorokin, A. Ya.; Pyrkov, L. M.; Frenkel', S. Ya.

TITLE: Analysis of certain rheological factors affecting the structure of the PVS fiber

SOURCE: Khimicheskiye volokna, no. 3, 1965, 2-7

TOPIC TAGS: polymer, polymer rheology, polymer chain, polymer property, polyvinyl alcohol, synthetic fiber, synthetic material, fiber deformation, fibrillar structure

ABSTRACT: A series of physico-chemical investigations was carried out to establish

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L 57054-65

ACCESSION NR: AP5013977

was considered to consist of three sections: 1) the part closest to the spinneret--of almost fluid consistency; 2) the intermediate zone of high elastic coagulation;

figures.
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L 57054-65
ACCESSION NR: AP5013977

ASSOCIATION: IVS AN SSSR , Leningrad (IVS AN SSSR)

SUBMITTED: 09Jun64 ENCL: 01 SUB CODE: MT

NO REF SOV: 006 OTHER: 010

Card 3/4

PYRKOV, L.M.; GOLUBEV, V.M.; FRENKEL', S.Ya.

Some data on the hydration of globular proteins in concentrated solutions. Biokhimiia 29 no. 1:58-64 Ja-F '64. (MIRA 18:12)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.
Submitted April 8, 1963.

BATRAKOVA, T.V.; SHEREMET'YEVA, T.V.; KAMALOV, S.K.; PYRKOV, L.M.

Production of fiber-forming materials on the base of acrylonitrile copolymers with N-alkyl derivative amides of citraconic and maleic acid. Khim. volok. no.6:17-19 '65. (MIRA 18:12)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
Submitted October 10, 1964.

SOROKIN, A.Ya.; ANDREYEVA, N.A.; VOLKOVA, L.A.; KOL'TSOV, A.I.; RUDAKOV, A.P.; PYRKOV, L.M.; FRENKEL', S.Ya.

Correlation of the structural and mechanical characteristics of polyvinyl alcohol fibers. Khim. volok. no.6:22-26 '65. (MIRA 18:12)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
Submitted June 9, 1964.

BEL'NIKEVICH, N.G.; PYRKOV, L.M.; SOROKIN, A.Ya.; FRENKEL', S.Ya.

Orientation draft of polyvinyl alcohol fibers. Khim. volok. no.5:24-27 '65. (MIRA 18:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

PYRKOV, L.M.

Effect of oxygen and stirring on the oxidation-reduction polymerization of acrylonitrile in the aqueous phase. Zhur.prikl.khim. 33 no.5:1154-1157 My '60. (MIRA 13:7)
(Acrylonitrile)

BRESLER, S.Ye.; PYRKOV, L.M.; FRENKEL', S.Ya.

Equilibrium sedimentation of block copolymers in the density gradient. Vysokom. soed. 2 no.2:216-220 F '60. (MIRA 13:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Polymers) (Sedimentation analysis)

BRESLER, S.Ye.; PYRKOV, L.M.; FRENKEL', S.Ya.

Sedimentation of graft copolymers in a density gradient. Approach to equilibrium, selective solvation, and polydispersity of composition. Vysokom.soed. 5 no.9:1315-1320 S '63. (MIRA 17:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

BRESLER, S.Ye.; PYRKOV, L.M.; FRENKEL', S.Ya.; LAYUS, L.A.; KLENIN, S.I.

Molecular conformation, and hydrodynamic and mechanical properties of 4:5 styrene - isoprene block copolymer. Vysokom.soed. 4 no.2:250-255 F '62. (MIRA 15:4)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Styrene polymers) (Isoprene)

BRESLER, S.Ye.; MARSHAL', Zh. ; PYRKOV, L.M.; FRENKEL', S.Ya.

Study of selective solvation by sedimentation in a density gradient. Vysokom.soed. 5 no.7:1101-1105 Jl '63. (MIRA 16:9)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Polymers) (Solvation) (Sedimentation analysis)

PYRKOV, L. M., FRENKEL, S. Ya.

"Interchain exchange reactions in radical polymerization."

report presented at the International Polymer Symposium, (IUPAC), Moscow, USSR, 14-18 June 1960.

81606

S/190/60/002/02/05/011
B004/B061

5.3831

AUTHORS: Bresler, S. Ye., Pyrkov, L. M., Frenkel', S. Ya.

TITLE: Equilibrium Sedimentation of Block Copolymers in the Density Gradient

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 2, pp. 216-220

TEXT: The authors used the method developed by M. Meselson et al. (Ref. 1) for determining the molecular weight of polymers by means of an ultracentrifuge, to analyze polystyrene, polyisoprene, and their block- and grafted copolymers. The drop in concentration was calculated from Svedberg's equation (Ref. 4). Table 1 gives the density of the solvents (butylchloride and dichloroethane) and the polymers. The experiments were carried out at 30°C with a Svedberg ultracentrifuge (54,000 rpm). The parameters of the Svedberg equation found are given in Table 2. Fig. 1 shows the equilibrium of the solvent mixture that occurred after three hours in the centrifuge, Fig. 2, the sedimentation of polystyrene, and

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81606

Equilibrium Sedimentation of Block Copolymers in the Density Gradient

S/190/60/002/02/05/011
B004/B061

Fig. 3, the sedimentation of the block copolymers. The distribution curve (Fig. 4) of this sedimentation was obtained with a УИМ-21 (UIM-21) measuring microscope and by graphical integration. The grafted polymer gathered in a belt in the middle of the sedimentation bulb, whilst the homopolymers gave a Boltzmann distribution on the bottom of the "meniscus". Preliminary data on the composition of the copolymers obtained by the "live-chain" method allow high chemical homogeneity to be concluded. There are 4 figures, 2 tables, and 6 references: 2 Soviet, 1 British, and 3 US.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR
(Institute of High-molecular Compounds of the AS USSR)

SUBMITTED: August 31, 1959

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33383
S/190/62/004/002/014/021
B110/B101

15 9300

AUTHORS: Bresler, S. Ye., Pyrkov, L. M., Frenkel', S. Ya., Layus, L. A., Klenin, S. I.

TITLE: Molecular conformation, and hydrodynamic and mechanical properties of 4:5 styrene - isoprene bulk copolymer

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 2, 1962, 250-255

TEXT: The authors studied the hydrodynamic and mechanical properties of hybrid polymers on the basis of the selective solubility of one type of blocks in the corresponding solvent to make a quantitative estimate of the conformation changes of macromolecules dependent on the solvent, and to measure the mechanical properties of the resulting films. They investigated 4:5 styrene - isoprene bulk copolymer (BCSI) made with butyl lithium and consisting of four polystyrene (PS) and five polyisoprene (PI) blocks. The molecular weight determined in methyl ethyl ketone was $M = 77{,}000$, that of PS: $M \approx 10{,}000$, that of PI: $M \approx 7500$. Solvents used were: benzene, toluene, heptane, octane, and methyl ethyl ketone. 0.1 mm thick films were obtained from 1 g/100 ml of solutions in heptane

Molecular conformation, and...

and methyl ethyl ketone on Hg surface at 25°C and 20 mm Hg. The diffusion coefficients were determined at 0.05% concentration by a Tsvetkov diffusometer. The sedimentation coefficients were determined by a Svedberg ultracentrifuge. The molecular weight was calculated according to Svedberg: $M = (S_0 RT)/\left[D(1-\bar{V}\varrho)\right]$ (2), and Flory and Mandel'kern, $2.5 \cdot 10^6 = \left[\eta_0 N/(1-\bar{V}\varrho)\right]\left[S([\eta]/M^2)^{1/3}\right]$ (3), where N = Avogadro's number; ϱ = density, and η_0 = viscosity of the solvent. (3) presupposes conformation of statistical nodes of macromolecules, the linear dimensions being proportional to $M^{1/2+\varepsilon}$ (ε = small parameter). The coincidence of different mean weights in different solvents indicates weak polydispersity. The absence of a relation between M_W and M_{SD} and the mean hydrodynamic weights $M_{S\eta}$ and $M_{D\eta}$ demonstrates the unsuitability of the model of statistical nodes. The PI blocks keep the octane-insoluble PS blocks in solution. Therefore, they form small pearls threaded on the polyisoprene string. In methyl ethyl ketone, it is vice versa. Flory's theory does not apply to this case. There is no relationship between "viscous" and

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Molecular conformation, and...

"diffusion" inertia radii for selective solvents. It follows that, in these solvents, the molecules are converted from statistical nodes into half-stiff particles, to which Fig. 2б, б does not apply but Fig. 2ї according to Schlick and Levy (see below). Films obtained from octane, heptane, and hexane solutions of BCSI with evaporation of the solvent are rubberlike, nontransparent, and highly elastic. Films from methyl ethyl ketone remind of plasticized PS. Films (A) obtained from heptane would resume their old shape when the loading ends, the more solid films (B) from methyl ethyl ketone to a smaller extent. (A) has: $E \approx 10$ kg/cm^2 like rubber. (B) has $E \approx 200$ kg/cm^2. Films from benzene are mechanically similar to (B). Blocks with globules "remember" their conformation on transition into the film (A) may be regarded as polyisoprene with chemically bound, glassy filler, (B) as PS with chemically bound plasticizer. "Tempering" occurs during film formation; during "annealing", the globules develop, and the properties of the film correspond to those of film obtained from benzene. There are 3 figures, 2 tables, and 9 references: 7 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: F. M. Merrett, J. Polymer. Sci, 24, 467, 1957. S. Schlick, M. Levy, J. Phys. Chem., 64, 883, 1960.

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Molecular conformation, and...

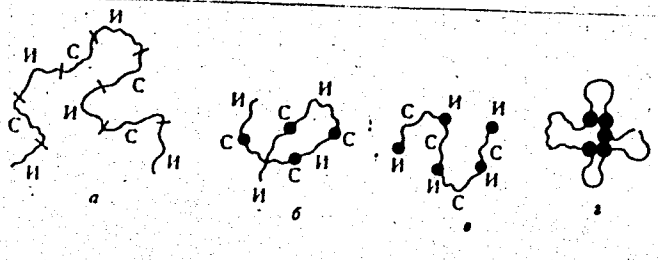
ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR
(Institute of High Molecular Compounds AS USSR)

SUBMITTED: February 10, 1961

Fig. 2. Diagram of the conformation of BCSI molecules in various solvents.

Legend: (a) Benzene (good solvent for both types of blocks); (б) octane; (в) methyl ethyl ketone; (г) structure to be suggested in selective solvents ("unsoluble" blocks aggregated); С = styrene blocks; И = isoprene blocks.

Fig. 2



Card 4/4

BAKALO, L.A.; KRENTSEL', B.A.; PYRKOV, L.M.; TOPCHIYEV, A.V., akademik; FRENKEL', S.Ya.

Mechanism of epichlorohydrin polymerization on the catalytic system $FeCl_3$ X propylene oxide. Dokl. AN SSSR 141 no.3:613-615 N '61. (MIRA 14:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Epichlorohydrin) (Polymerization)

80605

S/080/60/033/005/006/008

5.3831

AUTHOR: Pyrkov, L.M.

TITLE: On the Effect of Oxygen and Mixing on the Oxidation-Reduction Polymerization of Acrylonitrile in the Aqueous Phase

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, No 5, pp 1154 - 1157

TEXT: The principal effect of mixing in open systems is the aeration of solutions which leads to a decrease of the oxidation-reduction polymerization of acrylonitrile or inhibits it completely. Experiments were carried out in an aqueous solution (7:100 based on the volume) under the action of the oxidation-reduction system of $K_2S_2O_8$ and $Na_2S_2O_4$ which were taken in the amounts of 0.12 and 0.04%, respectively, based on the weight, at a pH value of 2.5 - 2.8 and a temperature of 20°C in the course of 30 min after dissolution of the initiators. The experiments were carried out in an atmosphere of air and argon. Polymerization in the Ar atmosphere is 15% on the average under static conditions, as well as in mixing. Static polymerization in the atmosphere of air is approximately 25%. In the case of sufficiently intensive mixing in the atmosphere of air, polymerizations are

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80606

S/080/60/033/005/006/008

On the Effect of Oxygen and Mixing on the Oxidation-Reduction Polymerization of Acrylonitrile in the Aqueous Phase

not observed at all. This effect is caused by the inhibiting action of oxygen. Besides that, oxygen forms with some unsaturated compounds peroxides, a part of which can promote polymerization. Polymerization in a motionless medium in the presence of air may be due to this effect. There are 2 tables, 1 diagram, 1 graph and 9 references: 2 Soviet, 3 English, 2 German, 1 American and 1 Japanese.

SUBMITTED: December 9, 1959

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PYRKOV, L.M.

PHASE I BOOK EXPLOITATION SOV/4983

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii, SSSR, Moskva, 14-18 iyunya 1960 g; doklady i avtoreferaty. Sektsiya II. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18; Papers and Summaries) Section II. [Moscow, Izd-vo AN SSSR, 1960] 559 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

COVERAGE: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly the kinetics of various polymerization reactions initiated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering interpolation. There are summaries in English, French and Russian. No personalities are mentioned. References follow each article.

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